



## **SANDY CITY STORM WATER MANAGEMENT PLAN**

*ADOPTED BY CITY COUNCIL ON*

*[February 25, 2014](#)*

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## Standard Acronyms/Abbreviations

**BMP** - Best Management Practices

**DEQ** - Department of Environmental Quality

**EPA** - Environmental Protection Agency

**MEP** - Maximum Extent Practicable

**MS4** - Municipal Separate Storm Sewer System

**NOI** - Notice of Intent

**NPDES** - National Pollutant Discharge Elimination System

**PUD** - Planned Unit Development

**SLVHD** - Salt Lake Valley Health Department

**SWMP** - Storm Water Management Plan

**UPDES** - Utah Pollutant Discharge Elimination System

## **EXECUTIVE SUMMARY**

### **Introduction**

The original, or first, Sandy City Storm Water Management Plan (SWMP) was submitted to the State of Utah's Department of Environmental Quality (DEQ) along with the original Notice of Intent (NOI) on March 10, 2003. The SWMP is required to be updated every five years and is now due for update and revision. The document contained herein is the latest version.

### **Background**

The Clean Water Act of 1972 authorized the Environmental Protection Agency (EPA) to protect the water quality of the United States. In 1987, Congress then passed the Water Quality Act, which established a phased approach for storm water discharges to the Waters of the United States giving the EPA further authority and responsibility to monitor and govern storm water discharges throughout the United States. This means they have the authority to regulate activities that occur within any drainage basin in the United States. The State of Utah's, Department of Environmental Quality, elected to exercise the option within the general guidelines set forth by the EPA to administer their own program. Therefore, Sandy City has prepared this SWMP according to the guidelines set forth by the DEQ of the State of Utah.

Currently, the program administered by the State DEQ is called the Utah Pollutant Discharge Elimination System (UPDES) program, in lieu of the National Pollutant Discharge Elimination System (NPDES) program. It is subject to being audited at any given time by the EPA and any entity receiving a permit under the program could also be audited. The UPDES program (as dictated by the NPDES program) requires that each municipality, large industrial user, and certain other entities that discharge substantial quantities of storm water to the Waters of the US, have a permit to discharge and to have an organized and authorized management plan to address the issues that arise from implementing the UPDES. To meet this requirement, Sandy City, along with the other municipalities in Salt Lake County, agreed to submit as co-permittees under the Salt Lake County application for the discharge permit. Along with this permit application, each City that is a co-permittee with Salt Lake County submitted their individual Storm Water Management Plan.

### **The Sandy City Storm Water Management Plan**

The Sandy City Storm Water Management Plan (SWMP) as outlined in this document

has been prepared and submitted for approval in an effort to stay in compliance with the requirements of the National Pollutant Discharge Elimination System (NPDES) and to provide a guidance document for administration as well as staff personnel. The “Purpose and Mission Statement” was formulated by a task committee. The committee then prepared the “Goals and Strategies” to fulfill the Purpose and Mission Statement.

The mission of the Sandy City Storm Water Management Plan is:

*To provide for an effective use of funding, staffing and regulatory powers in order to implement a storm water program that will (1) reduce storm water pollution to the maximum extent practicable, (2) effectively eliminate illegal non-storm water discharges into the storm drain system, and (3) comply with all regulatory requirements, seeking to achieve the long-term goal of protecting the practical and desired uses of local water resources.*

Specific goals of the Sandy City Storm Water Management Plan are:

Comply with the Federal Clean Water Act, State of Utah DEQ permit and recommendations from Salt Lake County.

- Reduce storm water pollution to the maximum extent practicable through conceptual design and implementation of Capital Projects.
- Effectively eliminate illegal non-storm water discharges into the storm drain system.

Specific strategies for obtaining these goals include:

- Continue to use the progress reports, work plans, annual monitoring reports, and meetings to communicate Program activities to the State and the Salt Lake County Storm Water Coalition.
- Coordinate with related watershed efforts in order to better understand problems, enhance the cost effective collection of data, and provide appropriate stakeholder input on watershed-wide problems related to urban runoff discharges.
- Continue education programs, information sharing and communication with other storm water programs and groups, which are vital to maintaining cost-effectiveness.
- Continue to seek partnering opportunities, grant funds, and coordination with other water quality programs to maintain cost effectiveness and funding leverage

## **Annual Report**

An essential aspect of the SWMP is the reporting process to demonstrate the status and progress being made by each participating entity. The first annual report for Sandy City was prepared and submitted for the fiscal year ending June 30, 2003. Sandy City adopted a thoroughly comprehensive storm water ordinance in January 2008 that addresses the issues of the required regulations and provides sufficient avenues for City personnel to enforce and administer the SWMP as outlined herein.

Throughout the development of the SWMP the committee's intent was to respond to the NPDES regulatory requirements. The City has taken on the task of implementing the SWMP and recognizes that over the next few years there are, and will be, many significant hurdles. Some of those include: development, submittal, a thorough education program (for both the general public as well as for City personnel); coordination with governing agencies; and, implementation of a monitoring and reporting system that will track the necessary parameters as discussed in this SWMP. Sandy City is excited about the benefits that the implementation of this SWMP is bringing to the community and the anticipated improvements to the water quality of our local water resources.

## **A. SANDY CITY STORM WATER MANAGEMENT PLAN**

### **A.1 Purpose and Mission Statement**

The purpose and mission statement of the Sandy City Storm Water Management Plan (SWMP), as well as accompanying goals and strategies, make up the City's Storm Water Program and are necessary to be an effective and "on-target" long-term success. In addition, the management plan will work in concert with other water quality plans to promote overall water quality improvement. Education is a major component in the Storm Water Management Plan. It is paramount that the public-at-large become more acquainted with and aware of storm water quality issues and the impacts of urban runoff pollution to water quality in general. Community participation in the plan will provide "buy-in" and ultimately improve the overall water quality in Sandy City and the Salt Lake Valley.

The mission of the Sandy City Storm Water Management Plan is:

*To provide for an effective use of funding, staffing and regulatory powers in order to implement a storm water program that will (1) reduce storm water pollution to the maximum extent practicable, (2) effectively eliminate illegal non-storm water discharges into the storm drain system, and (3) comply with all regulatory requirements, seeking to achieve the long-term goal of protecting the practical and desired uses of local water resources.*

### **A.2 Goals and Strategies**

The program is designed to meet storm water regulatory requirements. The program also seeks to achieve goals and implement strategies to reduce storm water pollutants and effectively eliminate illegal discharges. Implementation of the program will enhance the quality of life in Sandy City by improving the quality of waterways for all to enjoy. Specific goals include:

- Comply with the Federal Clean Water Act, State of Utah DEQ requirements and the Salt Lake County NPDES Permit
- Reduce storm water pollution to the maximum extent practicable through conceptual design and implementation of Capital Projects
- Effectively eliminate illegal non-storm water discharges into the storm drain system

Specific strategies for obtaining these goals include:

- Continue to use the progress reports, work plans, annual monitoring reports, and meetings to communicate program activities to the State Department of Environmental Quality and the Salt Lake County Storm Water Coalition

- Coordinate with related watershed efforts in order to better understand problems, enhance the cost effective collection of data, and provide appropriate stakeholder input on watershed-wide problems related to urban runoff discharges
- Continue education, information sharing and communication with other storm water programs and groups, which are vital to maintaining cost-effectiveness
- Continue to seek partnering opportunities, grant funds, and coordination with other water quality programs to maintain cost effectiveness and funding leverage

## **B. PUBLIC EDUCATION AND OUTREACH PROGRAM**

The Public Education and Outreach Program of the Storm Water Management Plan (SWMP) is designed to increase awareness for the general public, all public employees, and members of the commercial business and development sectors regarding the water quality concerns and Best Management Practices (BMPs) that may be implemented with respect to protection of storm water. The BMPs described in this section of the SWMP include training of professionals and municipal employees and education of the public sector. These education and training programs will introduce the Utah Pollutant Discharge Elimination System (UPDES) program, and focus on known contaminant sources and how to control these sources.

This program also integrates many other facets of the SWMP to provide current information and up-to-date BMPs to the end user. The following BMPs describe implementation tasks and assessment tasks to be completed by Sandy City for our Public Education and Outreach Program. Each department within the City will be responsible to implement and assess the tasks within the department's area of responsibility. All data will be reported to the Public Utilities Department for administration of the program and for filing of the annual report.

### **B.1 EDUCATION**

#### **B.1.1 SCHOOL PROGRAM**

Description: Provide students in public and private schools with educational materials, demonstrations and outreach activities regarding the impact of daily activities on storm water quality and the role each individual can play in improving that quality. Schools are encouraged to attend the County Water Quality Fair at Hogle Zoo as their educational demonstration. If they are unable to attend then materials will be provided for education.



Permit Requirement: II .F 1.a .- Public Education and Outreach

Storm Drain Marking Program: A program utilizing community groups to mark storm drain inlets to remind the public where storm water flows and help prevent illicit dumping and littering.

Educational Materials: Utilize existing materials available through the Salt Lake County Storm Water Coalition in addition to new educational materials created by Sandy City to glean information pertinent to Sandy City residents to inform residents of the impacts of storm water discharges on local water bodies. These materials will include pamphlets, tabloids, activity books, pencils, refrigerator magnets, note pads, etc.

Dr. Strangewater Video and Lesson: Utilize Dr. Strangewater video for classrooms and the booklet provided by Salt Lake County to reinforce the importance of where water goes and comes from and how easy it is to pollute. Children will learn that we must all protect our water. This video is offered to schools that cannot attend the County Water Quality Fair as an educational tool along with the associated workbook.

Objective: Reduction in the amount and number of pollutants entering our storm drain system by increasing student awareness of problems and solutions. Make the storm water slogan a normal part of a student's life.

**County Water Quality Fair at Hogle Zoo:** Encourage schools to attend this event so that they can learn about water quality in an environment where they can see running water and how pollutants might affect the quality of the water. This event offers booths about storm water and other water quality issues for students and teachers.

Objective: This event offers a great opportunity for students to see water in action at the zoo and hear how the zoo protects the water for the animals and visitors. This environment lends a refreshing atmosphere for learning about how to protect our storm water. One of our goals is to make the storm water slogan a normal part of a student's life.

Implementation and Assessment: The following table represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance, program effectiveness, and progress; following the identified schedule.

Year	Implementation	Assessment	Responsible Department
2014-2019	Storm Drain Inlet Marking Maintenance Program	Maintain the program and replace any markers that get damaged. Document number of marked drains and number of participants.	Public Utilities
2014-2019	Dr. Strangewater Video	Document number of student attendees.	Public Utilities
2014-2019	<u>County Water Quality Fair at Hogle Zoo. Encourage schools to attend this event so that they can learn about water quality in an environment where they can see running water. This event offers booths about storm water and other water quality issues for students and teachers.</u>	Teachers are given a booklet for the students to answer questions about what they learned to reinforce the materials. The number of attendees offers an assessment as to how valuable this event is to teachers and students.	Public Utilities Salt Lake County Storm Water Coalition
2014-2019	Distribute educational materials to use as handouts at school classes	Document materials distributed	Public Utilities

### B.1.2 COMMUNITY/RESIDENTIAL PROGRAM

Description: Inform the general public on the impacts of storm water discharges on streams, irrigation, and other bodies of water and of the steps that can be taken to reduce or eliminate pollutants in storm water runoff through outreach activities

and/or educational materials. Inform the general public about the hazards associated with illegal discharges and improper disposal of waste. Promote, publicize, and facilitate the proper management and disposal of used oil and household hazardous wastes. Distribute educational materials and classes addressing the proper use and application of pesticides, herbicides, and fertilizers.

Public Reporting: Promote public reporting of illegal dumping and illicit discharges. Reports may be called into phone number (801)352-4400. Procedures for formal complaints are in place. Initiate investigation and enforcement measures to follow-up on calls.

Informational Handouts: These information handouts will be set up at various City events to educate the public by illustrating the storm drain system and hydrological cycle, and impacts of pollutants on the streams and irrigation features in the City. The pamphlets and other handouts explain what the public can do to help reduce pollutants or eliminate them from our storm drain system. These informational brochures can be combined with our water conservation and watershed protection efforts throughout the City.

Mass Educational Materials: Mass educational materials designed to educate the community at large about storm water quality issues. This may be articles published in the Sandy City monthly newsletter, handouts mailed out with the monthly utility billing, or articles added to the Annual Consumer Confidence Report that is sent to all City residents. This would also include radio and television commercials, videos, stickers, etc. that are available through the Salt Lake County Storm Water Coalition.

Surveys: Periodically, a community survey will be conducted in Sandy City. The survey results will be used to help to determine and measure public awareness on a number of community issues or concerns. Storm drain and runoff issues will be added to this survey and then followed up to measure increases or decreases in public awareness and participation.

Salt Lake County Storm Water Coalition: A coalition of various local agencies whose purpose is reducing the load of pollutants entering storm drains and receiving water bodies and enforcing the appropriate regulations. The coalition meets monthly and discusses pertinent issues and reviews progress of each agency in meeting phase II requirements. Sandy City staff will have representation at these meetings.

Permit Requirement: ll.F.1.b and d.-Public Education and Outreach  
ll.F.3.f and g.-Illicit Discharges and Improper Disposal

**Objective:** Reduce pollutants to receiving waters by increasing public awareness of problems and solutions. Discourage the discharge of pollutants to the storm water system and receiving waters through enforcement actions taken against violators. Reduce the impact to water quality through timely mitigation and clean up actions. Educate residents and landowners of the potential impact to receiving waters from the over-application and misapplication of fertilizers, pesticides, and herbicides as well as the impacts of grass clippings and other yard or construction debris on the storm drain system.

**Implementation and Assessment:** The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. These goals will help us gauge permit compliance, program effectiveness, and progress following the schedule identified.

<b>Year</b>	<b>Implementation</b>	<b>Assessment</b>	<b>Responsible Department</b>
2014-2019	Community Survey periodically to test the knowledge of storm water issues and compliance with current ordinances and policies	Document feedback and measure improvement or lack of by the responses of residents.	Administration
2014-2019	Trans Jordan Landfill Information and Services (recycling, household hazardous waste, compost)	Publish information in Sandy City newsletter and update City website	Public Works
2014-2019	Salt Lake Valley Health Department (SLVHD) Household Hazardous Waste Program	Publish information in Sandy City newsletter and update City website	Public Works
2014-2019	Sandy City Recycling Program	Publish information in Sandy City newsletter and update City website	Public Works
2014-2019	Public Reporting of Illicit Discharges Follow up on reports, take enforcement action	Track the number of calls and the results of investigations. Maintain annual files for comparison to measure progress.	Public Utilities

2014-2019	Distribute educational materials to supplement the materials already available through the Storm Water Coalition	Document the number and type of materials distributed and the number handed out	Public Utilities
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### **B.1.3 COMMERCIAL AND OTHER LARGE DEVELOPMENTS PROGRAM**

Description: Provide materials and assist in educating and informing businesses and residents of water quality concerns in urban storm water runoff. This area will include large landowners such as schools and churches. Distribute educational material for the proper use of pesticides, herbicides, fertilizers, and landscape maintenance practices that affect storm water runoff.

Pesticide, Herbicide, Fertilizer, and Landscape Maintenance Practices: Educational materials to be distributed to commercial and industrial businesses, as well as contractors and residents through city-wide mailing. The materials will target education of recipients regarding the potential impacts on receiving waters from over-application of chemicals and from poor housekeeping practices during maintenance activities.

Salt Lake County Storm Water Coalition: Participate in monthly meetings and gather information and ideas on activities that others are implementing. Document those ideas and practices and implement those appropriate for Sandy City. Utilize available educational materials to educate businesses, developers, contractors and residents.

Permit Requirement: ll.F.1.c and e.- Public Education and Outreach

Objective: To educate local businesses, contractors and residents about the hazards associated with illegal discharges and improper disposal of wastes. Additionally, to provide information regarding the potential impact to receiving waters from the over-application or mis-application of pesticides, herbicides, and fertilizers and the impacts of poor maintenance practices on storm water runoff.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance, program effectiveness, and progress following the schedule identified.

Year	Implementation	Assessment	Responsible Department
2014-2019	Review Commercial and Residential Educational program	Determine changes needed and what is working and what is not	Public Utilities
2014-2019	Provide Educational Materials to developers, contractors and residents	Document materials produced and the number distributed. Effectiveness will be determined at meetings where BMPs are discussed and we look at changes in practices that have occurred over the 5 year period	Public Utilities
2014-2019	Participate in the Salt Lake County Storm Water Coalition and the associated events and activities.	Document meetings and educational materials developed and used through the coalition.	Public Utilities
2014-2019	State Storm Water Advisory Committee (SWAC)	Coordinate efforts to reduce storm water pollution and provide adequate flood control. Review governing regulations, disseminate information.	Public Utilities

#### **B.1.4 Public Employee Program**

Description: Provide Sandy City employees with educational materials, procedural instructions and policy decisions that affect their everyday lives with respect to storm water discharges. Promote BMPs in everyday facets of public employee's workday

activities as well as personal life style practices. Encourage innovative thinking to improve work related activities that would improve water quality in the storm drain system.

Employee Training Program: A “traveling” training session discussing the various activities of the Storm Water Management Plan and operational instructions will be provided for each of the departments to use. This training is conducted annually. This training was expanded in 2013 to include All City employees.

Employee Newsletter/e-mail: Periodic publication in the newsletter and citywide e-mail system to further educate employees and personnel. This widespread information system insures that each employee receives the educational materials concerning the storm water quality issues.

Employee Conferences and Workshops: For the field and office personnel that are directly involved with storm water issues, programs and activities promote attendance at training workshops and conferences dealing with storm water. Additionally, promote “in-house” conferences and work sessions as well as invite specialists in to provide training.

Permit Requirement: II.F.d and e. - Public Education and Outreach

Objective: To educate public employees about the hazards associated with illegal discharges and improper disposal of wastes. Increase the awareness and improve the operating procedures of the public employees so that not only do the improvements become effective in the work for and around the City, but also in the private life styles and activities of individuals.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance, program effectiveness and progress following the schedule identified.

Year	Implementation	Assessment	Responsible Department
2014-2019	Present at least one storm water related program per year to all city-	Determine what specifics are needed for the City employees then present it to them. Assess the level of acceptance and learning. Document presentations.	Public Utilities, Public Works, Parks, Community Development, Fire, Police, Administration, Courts
2014-2019	Gather and disseminate educational materials and information to City employees and personnel.	Document meeting dates, topics, and attendance. Document changes in practices over the 5-year period.	Public Utilities
2014-2019	Participate in seminars, conferences, and workshops that relate to storm water issues.	Promote attendance to meetings, gather and distribute educational materials. Determine effectiveness through annual evaluation.	Public Utilities, Public Works, Parks, Community Development, Fire, Police

## B.2 PUBLIC INVOLVEMENT/PARTICIPATION PROGRAM

The Public Involvement/Participation Program section addresses the importance of public involvement with respect to storm water. Community participation provides for broader public support, public understanding of the nature and magnitude of the problems we are faced with, shorter implementation schedules, a broader base of expertise, and development of important relationships with other community programs. The BMPs described in this section of the SWMP include opportunities for the public to play an active role in the development and implementation of the SWMP. Such opportunities include the public notification process and efforts to reach out and engage all economic ethnic and cultural groups, and additional community programs to foster public input and participation.



This program will be closely integrated with the Public Education and Outreach Program to incorporate education with hands-on programs. The following BMPs describe implementation tasks and assessment tasks to be completed by Sandy City for the Public Involvement/Participation Program.

### **B.2.1 PUBLIC NOTICE REQUIREMENTS**

Description: Comply with all State and Local public Notice requirements.

Permit Requirement: ll.F.2.b. - Public Involvement/Participation

Objective: Provide opportunities for public involvement in the development and implementation of the SWMP.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals are to gauge permit compliance, program effectiveness, and progress following the schedule identified.

Year	Implementation	Assessment	Responsible Department
2014-2019	Identify Public Notice Requirements	Document public notices issued	Public Utilities, Community Development
2014-2019	Incorporate the use of public notice requirements as required	Document the public notices advertised and the number and content of responses to the notices	Public Utilities, Community Development

### **B2.2 STORM DRAIN MARKING AND MAPPING**

Description: Identify and map storm drain inlets. Mark/Label inlets with markers to assist in public awareness of storm water regulations. Use public volunteer groups to mark/label storm drain inlet boxes, identify if there are curb inlets or not, if they are bicycle safe or not, and list the location of inlet by address.

Storm Drain Marking Program: A program utilizing community groups to paint or glue markers on storm drain inlets to discourage illicit dumping and littering.

Permit Requirement: II.F.2.c.- Public Involvement/Participation

Objective: To reduce pollutants and increase public awareness by identifying storm drain inlets, increasing public involvement and awareness of problems and solutions.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance, program effectiveness, and progress following the schedule identified.

Year	Implementation	Assessment	Responsible Department
2014-2019	Meet with individuals and groups to discuss volunteer projects and publish articles in the City newsletter to explain the needs, promote the program, and solicit help	Document the number of groups visited and their response. Document the number of calls received in response to newsletter articles	Public Utilities
2014-2019	Storm Drain Mapping Program	Document the number of inlets that are mapped and marked.	Public Utilities
2014-2019	Work systematically through our system to map and categorize all storm drain inlets	Review mapping quarterly during this period to review progress	Public Utilities
2014-2019	Work with community volunteers and employees during Sandy Pride Day to clean up debris in the city to reduce pollutants.	Participation numbers and trash bags distributed for disposal of debris.	Community Development, Public Works, Public Utilities

#### **B.2.4 OPEN HOUSE/INFORMATION BOOTHS**

Description: Organize open houses and information booths in conjunction with our water conservation and watershed efforts, at community events and public meetings to promote storm water runoff awareness and provide the public with information regarding storm water quality issues and concerns.

Informational Brochures: Informational brochures at various community events as well as at Sego Lily Gardens. Educational materials will be available to explain how the public can help reduce pollutants that effect the storm water runoff and receiving waters.

Objective: Provide additional opportunities to increase public awareness of the problems and solutions regarding storm water.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance, program effectiveness, and progress following the schedule identified.

<b>Year</b>	<b>Implementation</b>	<b>Assessment</b>	<b>Responsible Department</b>
2014-2019	Open houses/Information booths at community events or public meetings	Document representation at local events and meetings, assess the response and numbers visiting	Public Utilities, Community Development
2014-2019	Storm Water Booth at Annual Garden Fair at Sego Lily Gardens	Number of visitors, educational brochures handed out	Public Utilities

#### **C. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL**

The Construction Site Storm Water Runoff Control Program of the Storm Water Management Plan addresses the development, implementation and enforcement of a program to reduce pollutants in storm water runoff from construction activities that result in a land disturbance regardless of size, but particularly those of greater than or equal to one acre.

Description: Maintain existing programs and procedures for development and

construction projects. In areas of inadequate regulatory control, develop ordinances, policies, or standard operating procedures that will provide the necessary requirements to meet the objectives of storm water runoff control and that will have sufficient incentives and/or penalties to make them enforceable and encourage compliance.

Provide Training: Provide literature, descriptions, and details of potential mitigation measures to developers and contractors.

City Development Code: Update City Development Code to ensure it is current with policies and procedures.

Ordinance: Review ordinance on an annual basis to evaluate effectiveness for requirements of mitigation of erosion and sediment, blowing dust and other detriments from construction sites. This includes private and commercial developments as well as capital improvement projects.

Permit Requirement: II.F.4 - Construction Site Storm Water Runoff Control

Objective: Maintain and enforce existing policies, and where needed, develop new regulatory mechanisms to require construction operators to use erosion and sediment controls and to maintain appropriate structural and nonstructural BMPs during construction activities.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance, program effectiveness, and progress following the schedule identified.

Year	Implementation	Assessment	Responsible Department
2014-2019	Review existing construction site storm water controls and policies.	Update and change as necessary. Adopt new procedures if/when necessary	Public Utilities, Public Works
2014-2019	Continue to enforce the existing dust and erosion control plans for each and every development approval (this includes the provisions for blowing dust and mud tracking	Document each development and their plans. Monitor progress throughout construction activities. Evaluate periodically and update as necessary.	Public Utilities, Public Works

	onto public streets)		
2014-2019	Ordinance: review annually for effectiveness and applicability	Effectiveness will be evidenced by the reduction of silt and debris in storm drain system downstream of developments and construction site.	Public Utilities, Public Works
2014-2019	Review all SWPPPs for new and redevelopment projects	Mandatory viewing of Storm Water video on regulations for construction sites	Public Utilities, Public Works
2014-2019	City employee training for those tasked with construction site monitoring.	Document training classes and assess additional needs. Keep training and on-going program.	Public Utilities

#### **D. POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT**

The Post-Construction Storm Water Management in the New Development and Redevelopment Plan addresses storm water runoff from new development and redevelopment projects that disturb land regardless of size, but particularly those of greater than or equal to one acre, whether in part or as a whole project. Implementation and enforcement of a program will be put into place that reduces, prevents, or minimizes pollutants in storm water runoff and affects water quality.

Description: Maintain existing programs and procedures for post-development and post-construction projects. In areas of inadequate regulatory control, develop ordinances, policies, or standard operating procedures that will provide the necessary requirements to meet the objectives of storm water runoff control and that will have sufficient incentives and/or penalties to make them enforceable and encourage compliance.

Maintain Open Space: Encourage and promote the maintenance of open space. (Reference: Sandy City General Plan, PUD Ordinance 15-03-11, Sensitive Overlay Ordinance 15-08-03, and Open Space District 15-03-08)

Preserve Natural Drainage Patterns: Preserve natural drainage patterns and landscapes where possible, including preserving wetlands and riparian buffers by water bodies.

Ordinance: Review and update City ordinance and sections of Development Code to provide for improved environmental protection of City natural resources (e.g. Source Protection Ordinance, Water Conservation Ordinance, etc.)

Sensitive Overlay: In 1987, Sandy City adopted the Sensitive Overlay Zone as part of the City's Development Code. The Sensitive Overlay Zone includes standards for the following:

- Storm water runoff
- Erosion
- Hillside fire protection
- Preservation of natural features; ridge lines, plant formations, rock outcroppings
- Maintenance of public access areas
- Protection of natural drainage areas
- Grading; protection of excessive excavation and terracing
- Site and development design criteria
- Aesthetics and vista protection

To accomplish proper review of sensitive areas, developers are required to submit the following reports and mapping:

- Map areas of development site with > 30% slopes
- Geo-technical report
- Soils report
- Rock fall and debris potential
- Plot plans identifying vegetation, impervious surfaces, and building locations
- Vegetation and revegetation plans
- Fire protection
- Drainage plan
- Erosion plan
- Grading plans, including any cuts and fills

Permit Requirement: II.F.5 - Post-Construction Storm Water Management in New Development and Redevelopment

Objective: Maintain and enforce existing policies, and where needed, develop new regulatory mechanisms to improve and enhance the storm water system. Implement and enforce BMPs to the MEP, and reduce the discharge of pollutants from areas of

municipal new development and redevelopment after construction is completed.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance, program effectiveness, and progress following the schedule identified.

<b>Year</b>	<b>Implementation</b>	<b>Assessment</b>	<b>Responsible Department</b>
2014-2019	Provide for continued review and updating of the City's Development Code and institute new and progressive standards and requirements for protecting storm water quality	Update and change as necessary. Adopt new procedures if/when necessary.	Public Utilities, Community Development
2014-2019	Include storm water protection and non-point source prevention as one of the premises for all environmental protection standards in the Development Code.	Adopt the revision to the Development Code and perform development reviews based on this revision.	Public Utilities, Public Works, Community Development
2014-2019	Limit disturbance of soils, vegetation and other natural features.	Enforce policy procedures to allow this to occur.	Public Utilities, Public Works, Parks
2014-2019	Improve landscaping standards to reduce water use.	Enforce policy procedures to allow this to occur.	Public Utilities, Parks
2014-2019	Provide for aggressive re-vegetation requirements to reduce erosion and fugitive dust potential.	Enforce policy procedures to allow this to occur.	Public Utilities, Public Works, Parks
2014-2019	De-Icing Practices	Review and assess De-Icing practices for prevention and reduction in storm water pollution. Assess location of water quality impacts during	Public Utilities, Public Works



		operation and determine pollutants of concern.	
2014-2019	Salt Pile Management	Maintain list and site map of all salt pile storage and transfer locations. Conduct inspections of all salt storage areas and document controls in place and potential problems.	Public Works

## **E. POLLUTION PREVENTION/GOOD HOUSEKEEPING PROGRAM**

The Pollution Prevention/Good housekeeping Program of the Storm Water Management Plan addresses routine activities in the operation and maintenance of drainage systems, roadways, parks and open spaces, and other municipal operations in Sandy City. This program will help to ensure a reduction in pollutants entering the storm drain system from these operations. The program will implement BMPs to address specific roadway practices, which will include snow removal, De-Icing, salt pile management, street sweeping and trash storage, collection and disposal. It will also implement BMPs to address the collection, storage, and disposal of materials collected from storm drains and inlet boxes during maintenance of the drainage system. This program will also address the City's current operational practices regarding neighborhood trash pickup programs, street sweeping, lawn and landscape maintenance practices, and associated fertilizer application practices. The program will also address training of City personnel regarding these practices and promote awareness of water quality issues and concerns as they apply to these daily operations. The following BMPs describe implementation tasks to be completed and carried out by Sandy City for the Pollution Prevention/Good Housekeeping Program.

### **E.1 STORM DRAIN SYSTEM MAINTENANCE**

Description: Maintain existing drainage system operation, maintenance and cleaning procedures. Identify areas of chronic problems, and develop and implement corrective actions for these areas.

Permit Requirement: 11.F.6.a(1) - Pollution Prevention/Good Housekeeping  
11.F.1.b. - Public Education and Outreach

Objective: Maintain and operate the storm water drainage system in a manner to reduce the discharge of pollutants to the maximum extent practicable.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness, and progress, following the schedule identified.

Year	Implementation	Assessment	Responsible Department
2014-2019	Review existing operation and maintenance practices and procedures	Update and change as necessary	Public Utilities
2014-2019	Complete inventory of all inlets and outfalls and map	Document progress	Public Utilities
2014-2019	Compile data and information regarding the optimum frequency of maintenance and cleaning of system components	Establish a log documenting these activities. Evaluate annually	Public Utilities
2014-2019	Prioritize areas within the system of high concern or requiring a high frequency use/frequent cleaning	Document these areas and establish a system to address needs. Document the maintenance performed and cleaning frequency	Public Utilities
2014-2019	Periodically evaluate inspection needs	Assess needs and address ways to meet these needs	Public Utilities
2014-2019	Maintain a program for Public Reporting	Document reports received and follow-up activities	Public Utilities
2014-2019	Provide training for all Department Employees regarding water quality and pollutants of concern	Document training activities	Public Utilities

## E.2 STORM DRAIN SYSTEM WASTE DISPOSAL

Description: Review and assess current disposal procedures for waste removed from the storm drain system. Such wastes include dredge spoil, accumulated sediments, floatables and other debris.

Permit Requirement: 11.F.6.b.(2) - Pollution Prevention/Good Housekeeping

Objective: Proper removal and disposal of waste from the storm drain system to reduce the discharge of pollutants to the MEP.

Implementation and assessment: The table below represents measurable goals for this

BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness, and progress, following the schedule identified.

<b>Year</b>	<b>Implementation</b>	<b>Assessment</b>	<b>Responsible Department</b>
2014-2019	Assess the needs for structural controls for materials removed from the storm drain system	Evaluate needs and make recommendation for control measures	Public Utilities
2014-2019	Monitor handling of material to determine size of control structure(s)	Monitor and account for materials deposited in control facility. Monitor and measure all materials hauled from facility to disposal site. Evaluate quality and content of handled material to determine if it contains hazardous contaminants.	Public Utilities
2014-2019	Develop and implement operational procedures for disposing and storing materials	Document procedures and effectiveness of new controls	Public Utilities, Public Works, Community Development, Parks, Police, Fire, Administration
2014-2019	Monitor procedures and practices and update as necessary. Provide ongoing training for personnel	Document training, number of attendees, and procedural changes	Public Utilities, Public Works

2014-2019	Budget for design and construction of necessary control structure(s)	Document constructed projects and include them in the routine of operations and maintenance.	Public Utilities, Public Works
2014-2019	Operate and maintain the wash bay facility.	Haul the waste material to the landfill.	Public Works, Public Utilities

### E.3 SPILL PREVENTION AND RESPONSE PROGRAM

**Description:** Work with the Fire Department to maintain an effective Spill Prevention and Response Program. Maintain personnel on call and provide them with the necessary training and equipment to respond to reported spills or discharges to the MEP. Identify and investigate the source of the discharge and use the regulatory authority to enforce actions against violators to correct the illicit discharge activity.

**Spill Prevention and Response Program:** A program with established procedures for preventing, containing, and responding to spills that may discharge into the storm drain system. Sandy City currently responds to reports of spills or illegal discharges and initiates enforcement actions. Local fire departments are also notified and equipped to respond to spills, mitigate spills, and eliminate the danger to human health.

**Permit Requirement:** II.F.6.f. - Spill Prevention and Response  
II.F.3. - Illicit Discharge and Improper Disposal

**Objective:** Training employees in proper procedures. Prevent spills from reaching the storm drain system and subsequently affecting the receiving waters. Pursue enforcement actions against violators to discourage and eliminate further violations.

**Implementation and assessment:** The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness, and progress, following the schedule identified.

Year	Implementation	Assessment	Responsible Department
2014-2019	Review and inventory current program, agency personnel, and equipment available for spill response and cleanup	Document results of inventory and review	Public Utilities, Public Works, Community Development, Parks, Police, Fire, Administration
2014-2019	Evaluate current training levels and programs and provide training as necessary	Document training provided and number of attendees	Public Utilities, Public Works, Community Development, Parks, Police, Fire, Administration
2014-2019	Conduct spill response as necessary	Document spills and response activities and any enforcement actions taken	Public Utilities, Public Works, Community Development, Parks, Police, Fire, Administration

#### **E.4 MATERIALS MANAGEMENT PROGRAM**

Description: Proper management of materials will serve to minimize pollutants entering the storm drain system. BMPs for this program can be either non-structural or structural controls.

Permit Requirement: II.F.6.b.e. and f. - Pollution Prevention / Good Housekeeping for Municipal Operations

Objective: Reduce the pollutants reaching the storm drain system by implementing good materials management practices.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance, program effectiveness, and progress following the schedule identified.

Year	Implementation	Assessment	Responsible Department
2014-2019	Snow Removal /De-Icing Practices	Review and assess De-Icing practices for prevention and reduction in storm water pollution. Assess location of water quality impacts during operation.	Public Utilities, Public Works
2014-2019	Salt Pile Management	Maintain list and site map of salt pile storage and transfer location. Conduct inspections of salt storage area and document controls in place and potential problems.	Public Works
2014-2019	Salt Pile Management Training	Provide personnel training once each permit term. Document training sessions and attendees.	Public Works
2014-2019	Pollution Prevention at Maintenance Yards/SWPPP	Prepare and adopt a Pollution Prevention Plan for Maintenance Facilities.	Public Utilities, Public Works, Fire, Police, Parks

#### **F. ILLICIT DISCHARGES AND IMPROPER DISPOSAL PROGRAM**

The Illicit Discharges and Improper Disposal Program section of the SWMP addresses non-storm water flows that are discharged to receiving waters via storm water conveyance systems. The program will implement BMPs to assist in identifying illicit discharges to the storm water system and eliminating these discharges from the system. This program will focus on prevention of new illicit discharges to the system by means of education, regulation, spill prevention, and improved response.

This program will also be integrated with the Public Education and Outreach Program

to promote awareness of the importance of protecting the storm water system from illicit discharge and the resultant impact to receiving waters. Illicit discharges effect not only surface waters, but could also create groundwater contamination. The following BMPs describe implementation tasks and assessment tasks to be completed by Sandy City for this program.

## **F.1 STORM DRAIN SYSTEM MAP**

Description: Update existing storm drain map as necessary

Permit Requirement: II.F.3.a. - Illicit Discharges and Improper Disposal

Objective: Identify intake and discharge areas of the storm water system in order to determine the source and extent of dry weather flows, and the particular water bodies these flows impact. The land use map is used for tracing dry weather flows and for computing the annual storm water loads.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance, program effectiveness, and progress following the schedule identified.

<b>Year</b>	<b>Implementation</b>	<b>Assessment</b>	<b>Responsible Department</b>
2014-2019	Review existing data and Maps of the system	Update as needed	Public Utilities, Public Works, Parks
2014-2019	Update land uses information and maps for Sandy City	Revise land use changes as necessary	Public Utilities, Public Works, Community Development, Parks

## **F.2 STORMWATER ORDINANCE**

Description: Review current City ordinances and develop new ordinances as necessary to prohibit illicit discharges into the storm drain system. Ordinances should address appropriate enforcement procedures and actions. Illicit discharges are defined as any discharge to the storm drain system that is not composed entirely of storm water. Examples of this include sanitary wastewater, improper disposal of waste oil, paint, household toxic chemicals and spills from roadway accidents.



Exceptions: (UPDES Permit, Part II.F.3.d.)

- water line flushing
- diverted stream flows
- rising ground waters
- uncontaminated ground water infiltration (as defined in CFR 35.2005 (20) to separate storm drains
- discharges from potable water sources
- uncontaminated footing and foundation drains
- air conditioning condensation
- irrigation water
- springs
- lawn watering
- individual residential car washing
- flows from riparian habitats
- street wash waters
- discharges or flows from emergency fire fighting activities

Permit Requirement: II.F.3.b - Illicit Discharges and Improper Disposal

Objective: Storm drains are not designed to accept and process illicit discharges. Untreated discharges contribute to high levels of pollutants entering receiving water bodies. Such pollutants include heavy metals, toxic materials, oil, grease, and bacteria. Studies conducted by the EPA have shown these levels to be high enough to significantly degrade receiving water quality. An effective Storm Water Ordinance, with enforcement procedures, will contribute to the elimination of illicit discharges into the storm drain system.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance, program effectiveness, and progress, following the schedule identified.

Year	Implementation	Assessment	Responsible Department
2014-2019	Review current ordinance and any proposed ordinance	Assess for needed changes and or modifications	Public Utilities, Public Works, Community Development, Parks, Police, Fire, Administration

2014-2019	Implement storm water ordinance	Document any investigation efforts and enforcement actions taken	Public Utilities, Public Works, Community Development, Parks, Police, Fire, Administration
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### F.3 DRY WEATHER SCREENING PROGRAM

Description: Plan and Implement a Dry Weather Screening Program designed to detect and address illicit discharges.

Dry Weather Screening Program: The Dry Weather Screening Program consists of inspecting each of the major and minor outfalls that are owned and operated by Sandy City at least once during the permit term. This program will provide a framework for field screening the outfalls and to identify suspect outfalls as a basis for initiating more detailed drainage area investigations. In addition, the storm drain system map is updated on an annual basis to add and delete outfalls to reflect field conditions as appropriate.

Investigation and enforcement: Any dry weather flows that are identified are traced to their source. Sandy City will inform the Salt Lake Valley Health Department of any illicit connections or illegal discharges. The Health Department in conjunction with Sandy City will pursue enforcement action.

Permit Requirement: II.F.3.c. - Illicit Discharges and Improper Disposal

Objective: Identify and eliminate illicit discharges into the storm drain system. Dry weather screening will be conducted on all identified outfalls at least once during the permit term.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance, program effectiveness, and progress, following the schedule identified.

This requirement for implementation will be deferred to Salt Lake County Storm Water Coalition. This is task six of the Co-permit requirement accountability (Exhibit B).

Year	Implementation	Assessment	Responsible Department
2014-2019	Implement a Dry Weather Screening Program	Document the findings of the program, number of outfalls visited, and number of outfalls with suspect conditions	Public Utilities
2014-2019	Continue Dry Weather Screening Program and investigate suspect outfalls showing evidence of illicit discharge	Document investigation efforts and findings	Public Utilities, <del>Salt Lake County Storm Water Coalition</del>
2014-2019	Report findings to Salt Lake Valley Health Department (SLVHD) to take actions toward eliminating illicit discharges	Document enforcement actions and follow up as necessary	Public Utilities

Sandy City is excited about the benefits that implementing this SWMP will bring to the community and the anticipated improvements to the water quality of our local water resources.